



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/463,144    01/20/00    UMEDA

S    43890-392

EXAMINER

MM91/0926

MCDERMOT WILL & EMERY  
600 13TH STREET NW  
WASHINGTON DC 20005-3096

LATTIN, C

ART UNIT

PAPER NUMBER

2812

DATE MAILED:

09/26/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

## Office Action Summary

Application No.

09/463,144

Applicant(s)

UMEDA ET AL.

Examiner

Christopher W Lattin

Art Unit

2812

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, and 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue (U.S. Patent 5,352,895).

Inoue teaches a device and its method of formation including the connection of a field effect transistor element on which a gate electrode is formed on the rear surface of the substrate, a resistive element with a top and bottom electrode, and a sensing element for sensing energy from outside and generating an electric signal, wherein the resistive element is comprised of a ceramic material.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue in view of Thornburg (U.S. Patent 3,987,311).

Inoue is applied supra and teaches all of the limitations of claim 3, but fails to teach specifically teach the formation of electrodes which contain chromium or tin or indium. Thornburg teaches a method of forming an electrode for a resistor using chromium. It would have been obvious to one skilled in the art at the time of the invention to form an electrode out of chromium as taught by Thornburg in order to form electrical connection to the resistor and the sensor of Inoue.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue in view of the admitted prior art.

Although Inoue fails to specifically disclose a method of applying a conductive material for component attachment, the admitted prior art shows a method of producing a device with similar electrical characteristics that utilizes conductive material to attach the devices to the substrate. It is inherent in this prior art to control the amount of material so as to control the conductivity of the device. To not do so could result in shorts or other defects during the use of the device. Thus, it would have been obvious to one skilled in the art at the time of the invention to control the amount of material so as not to submerge the device in the material sufficiently to alter the electrical characteristics of the device.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue in view of admitted prior art as applied to claim 7 supra and further in view of Sergeant, J.E. and Harper, C.A. (Hybrid Microelectronics Handbook, Second Edition, McGraw-Hill, Inc. 1995, p.p. 11-78).

Inoue in view of admitted prior art is applied supra and teaches all of the limitations of the claims, but fails to teach trimming of the resistors to obtain a final desired value. The process of laser trimming is well known as taught, for instance, in Sergeant and Harper in reference to a thick film resistor. It thus would have been obvious to one skilled in the art at the time of the invention to use cutting to obtain a desired resistance value after forming the resistive device taught by Inoue in view of the admitted prior art.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue in view of Arai et al. (U.S. Patent 5,576,222).

Inoue teaches all of the limitations of the claim, but fails to teach the processing of resistor in the gas combinations described in claims 8 and 9. Arai et al. are provided as an example of the skill in the art in regards to thermal processing to change electrical characteristics. It would have been obvious to one skilled in the art at the time of the invention to use annealing steps to enhance the electrical qualities of the device Inoue.

### ***Conclusion***

The prior art made of record in the Notice of References Cited and not relied upon in this action is considered pertinent to applicant's disclosure. U.S. Patents 6,017,775 and 5,338,690.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Lattin whose telephone number is (703)

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305-3017. The examiner can normally be reached Monday through Friday from 8:00 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling, can be reached at (703) 308-3325. The fax number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



CWL  
September 19, 2001



John F. Niebling  
Supervisory Patent Examiner  
Technology Center 2800